

**DRAFT DISCUSSION PAPER**

**GEOGRAPHIC SCOPE**

**AUGUST 14, 1995**

**Introduction**

The appropriate scope of analysis and action for the CALFED Bay-Delta Program (**Program**) has been under discussion for the past two months. Establishing an appropriate geographic and issue scope is essential to the success of the Program. A scope that is too narrow, while expedient, may result in issues not being addressed in a comprehensive fashion. A scope that is too large may result in an overly complex planning process causing difficulty in developing implementable solutions.

An approach which has evolved through both technical and public forum discussions is to use a tiered geographic scope focusing on the Bay-Delta system for purposes of problem definition, while allowing solution generation over a much broader area. Specifically, the CALFED Bay-Delta Program proposes to address problems which are manifest in the Suisun Bay/Suisun Marsh and Delta area. However, the scope of possible solutions to those problems would encompass any action which can be implemented or influenced by the CALFED agencies to address the identified problems, regardless of whether its implementation takes place within the Delta/Suisun Bay/Suisun Marsh area (see figure 1).

**Geographic and Issue Scope for Problems**

The geographic scope for the CALFED Bay-Delta Program will consist of the legally defined Delta, Suisun Bay (extending to the Carquinez Strait) and Suisun Marsh. For purposes of this Draft Discussion Paper, this geographic area will be simply called the "Delta".

Any problem currently associated with (1) the management and control of water or (2) the beneficial use of water within the Delta<sup>1</sup> (including both environmental and economic uses)

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<sup>1</sup> The California Code of Regulations, Title 23, Sections 660 - 674, lists a number of beneficial uses of water in California. Beneficial uses which are relevant to the identification of Delta problems are: Domestic Uses; Irrigation Uses; Municipal Use; Industrial Use; Fish and Wildlife Preservation and Enhancement Use; Aquaculture Use; Recreational Use; Water Quality Use; and Heat Control Use.

is within the purview of CALFED Bay-Delta Program provided that at least part of the problem is manifested within the Delta. This general definition can be further broken down into two general (and overlapping) perspectives: (1) the Delta as a region in its own right; and (2) the Delta as one piece of a complex and interconnected water/ biological system. Taking each perspective in turn:

The Delta as a region in its own right. Viewed without reference to the outside world, the Delta has numerous characteristics which fall under the aegis of the Program. For example:

- Delta habitat
- Delta farming
- Delta recreation
- Delta resident fish
- Delta plant species
- Delta diversity
- Within-Delta municipal and industrial uses
- Delta infrastructure

Note that the Program is not committed to solving problems and providing benefits within each of these categories. Rather, as noted above, the Program will only address problems within these categories associated with (1) the management and control of water or (2) the beneficial use of water. However, as discussed in more detail below, the Program will identify impacts on each of the categories from the proposed solutions and propose mitigation for any impacts.

The Delta as one piece of an interconnected water/ biological system. Many things, from water and water quality constituents to fish and birds, move across the boundaries of the Delta, whether into the Delta, out of the Delta, or across the Delta. Problems with these various "inputs" and "outputs" fall under the aegis of the Program, provided that at least part of each problem is manifested in the Delta. Examples of Delta inputs and outputs which might trigger the identification of a problem within the purview of the Program include:

#### INPUTS

Inflow patterns  
Toxic inflows  
Salinity inflows  
Nutrient inflows  
In-migrating fish  
In-migrating birds

#### OUTPUTS

Delta outflow patterns  
Toxic outflows  
Salinity outflows  
Nutrient outflow  
Out-migrating fish  
Out-migrating birds

Temperature inflows

Temperature outflows

Water diversion patterns

Water quality constituents in diversions

Entrainment of biota in diversions

Examples of problems which would be outside the purview of the CALFED Bay-Delta Program because they fail to qualify from either perspective include:

- Problems caused by discharges from wastewater treatment plants in the South San Francisco Bay.
- Land subsidence in the Central Valley.
- Populations of fish in reservoirs.

### **Geographic and Issue Scope for Solutions**

In contrast to the PROBLEM SCOPE, which excludes problems not manifested within or closely linked to the Delta, the SOLUTION SCOPE is quite broad, potentially including any action which could help solve identified problems. Thus, the geographical scope for solutions would expand to include at least the Central Valley watershed, the area served by the Southern California water system, and the Pacific Ocean.

An expanded solution scope is necessary because many problems related to the Delta are caused by factors outside the Delta. Moreover, an expanded solution scope is desirable from a planning point of view because more benefits may be generated at lower cost if solutions are not limited to the geographic Delta. For example, the problem of salmon populations is linked to the Delta because of high salmon mortality during salmon migrations. However, the problem of salmon populations goes far beyond the Delta. One response would be to reduce salmon mortality during salmon migration through the Delta. However, it might be less expensive or ecologically preferable to promote greater salmon production upstream.

Similarly, if water-borne organic carbon generated within the Delta is deemed to be a problem because it may form carcinogens during water treatment processes, one solution would be to reduce the production of organic carbon within the Delta or to shift the diversion point. Alternatively, water exporters may be able to improve water quality in a more cost-effective or ecologically preferable manner through new treatment technologies.

### **Solution Priorities**

The Program cannot fully solve every possible problem which falls within its purview. Therefore, the Program will need to assign priorities to various problems. The Program will give highest priority to problems (as defined above) which are acute, of broad concern, and closely related to the Delta as a region or as an element in an interconnected water/biological system. Other problems will receive lower priority.

For example, the Delta is an ecological zone of major importance and a major element in an interconnected biological system (e.g., it is a migration corridor). Therefore, the problem of the Delta's declining environmental health, including inputs to and outputs from the Delta, will receive high priority. Similarly, the Delta is a key element in the water supply system. Therefore, problems with unsatisfactory water diversion patterns (volume and quality) will receive high priority.

On the other hand, the problem's associated with reduced pulse flows in San Francisco Bay would receive a lower priority (assuming it is within the problem scope) because the problem is only marginally related to the Delta (The Delta passes water released from above the Delta into the Bay, but is not a primary cause of reduced pulse flows.).

### **Dealing with the Impacts of Possible Solutions**

The Program is charged with developing solutions to a number of identified Delta problems. Each possible solution to Delta problems, in turn, may have additional impacts, both within and outside the Delta (whether positive or negative). The Program will analyze carefully the possible negative impacts of various Delta solutions as part of the environmental review process and will take those impacts into consideration in the development of viable alternatives. Where impacts remain, the Program will develop mitigation measures as required by the environmental review process.

### **Integration with Other Processes**

The CALFED Bay-Delta Program is not operating in isolation. Numerous other programs already exist to address some of the problems and solutions within the purview of the Program, particularly in the upstream areas. The Program will assess the degree to which existing processes are successfully dealing with problems from the perspective of the Program. Where existing processes are adequate, the Program may simply establish a linkage. Where existing processes are inadequate because of lack of funding or other

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institutional constraints, the Program may need to include recommendations to improve existing processes, include new actions in its various alternatives, or mobilize the CALFED agencies to advance the existing processes. In this way, the CALFED Bay-Delta Program will provide a framework to demonstrate how new and existing programs should be coordinated to achieve a comprehensive and lasting solution.

Figure 1

# Problem Area Inputs/Outputs

